

September 9, 2004

MEMORANDUM TO: C. William Reamer, Director
Division of High-Level Waste Repository Safety
Office of Nuclear Material Safety
and Safeguards

FROM: Robert M. Latta, Sr. On-Site Licensing Representative /RA/
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SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION ON-SITE LICENSING
REPRESENTATIVES' REPORT ON THE YUCCA MOUNTAIN
PROJECT FOR MAY 1, 2004, THROUGH JUNE 30, 2004

The purpose of this memorandum is to transmit the U.S. Nuclear Regulatory Commission (NRC) On-Site Representatives' (ORs) report for the period of May 1, 2004, through June 30, 2004.

This report highlights a number of Yucca Mountain Project activities of potential interest to NRC staff. The ORs continue to respond to requests from NRC Headquarters staff to provide various documentation and feedback related to Key Technical Issues (KTIs) and their resolution. During this reporting period, the ORs continued to observe activities associated with Yucca Mountain site activities, KTIs, and audits. The ORs also attended various meetings and accompanied NRC staff on visits to Yucca Mountain.

If you have any questions on this report or its attachments, please call Robert Latta, on (702) 794-5048, or Jack Parrott, on (702) 794-5047.

Attachments:

1. U.S. Nuclear Regulatory Commission On-Site Licensing Representatives' Report Number OR-04-03 for the Reporting Period of May 1, 2004, through June 30, 2004
2. Table 1: U.S. NRC On-Site Licensing Representatives' Tracking Report for Open Items Followed in Bi-Monthly OR Report

cc: See attached list

Memorandum to C.W. Reamer from R. Latta and J. Parrott, dated: September 9, 2004
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E. Smith, Chemehuevi Indian Tribe
D. Buckner, Ely Shoshone Tribe
V. Guzman, Walker River Paiute

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If you have any questions on this report or its attachments, please call Robert Latta, on (702) 794-5048, or Jack Parrott, on (702) 794-5047.

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2. Table 1: U.S. NRC On-Site Licensing Representatives' Tracking Report for Open Items Followed in Bi-Monthly OR Report

cc: See attached list

DISTRIBUTION:

ACNW	CNWRA	HLWRS r/f	LSN	JStrosnider	MFederline	LKokajko
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***See Previous Concurrence**

OFC	HLWRS	HLWRS	Tech Ed	HLWRS	OGC	HLWRS
NAME	RLatta*	JParrott*	EKraus*	FBrown*	JMoore*	CWReamer
DATE	08/16/04	08/16/04	08/16/04	08/27/04	08/30/04	09/09/04

U.S. NUCLEAR REGULATORY COMMISSION
ON-SITE LICENSING REPRESENTATIVES' REPORT

NUMBER OR-04-03

FOR THE REPORTING PERIOD OF MAY 1, 2004, THROUGH JUNE 30, 2004

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Table 1: U.S. NRC ON-SITE LICENSING REPRESENTATIVES' TRACKING REPORT FOR
OPEN ITEMS FOLLOWED IN BI-MONTHLY OR REPORT

ACRONYMS AND ABBREVIATIONS

ACRO	TITLE
AMR	Analysis Modeling Report
AP	Administrative Procedure
BSC	Bechtel SAIC Company, LLC
CAQ	Condition Adverse to Quality
CNWRA	Center for Nuclear Waste Regulatory Analyses
CR	Condition Report
DOE	U.S. Department Of Energy
ECRB	Enhanced Characterization of the Repository Block
ESF	Exploratory Studies Facility
FEPS	Features, Events, and Processes
HLWRS	High-Level Waste Repository Safety
IV&V	Independent Verification and Validation
KTI	Key Technical Issue
LA	License Application
NRC	U.S. Nuclear Regulatory Commission
OITS	Open Items Tracking System
OR	On-Site Representative
OQA	Office of Quality Assurance
QARD	Quality Assurance Requirements Description
RIT	Regulatory Integration Team
SCWE	Safety Conscious Work Environment
TWP	Technical Work Plan
YMP	Yucca Mountain Project

EXECUTIVE SUMMARY

GENERAL SITE ISSUES

A power outage occurred at the site in May, but there was no effect on ongoing testing. Also during this reporting period, the Site Operations Manager suspended all underground operations because of uncertainty about the operable condition of the mine power centers.

EXPLORATORY STUDIES FACILITY TESTING

The Project used a consultant to inspect the 301X areas for any issues related to potential rock fall and ground support.

ENHANCED CHARACTERIZATION OF THE REPOSITORY BLOCK TESTING

Current plans call for a re-entry for equipment maintenance, observation, and possible sample collection behind the bulkhead at Station 17+63, in the September 2004 time frame. Also, during this reporting period, tracer studies continued, and neutron logging was conducted in Alcove 8.

SURFACE-BASED FIELD TESTING

During this reporting period, the aeromagnetic survey around the Yucca Mountain area was resumed. This work was completed the week of June 7, 2004. Water well drilling in Inyo County, California, has been put on hold until early fall 2004.

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT AUDIT OF "ANALYSIS REPORTS"

The On-Site Representatives (ORs) observed the conduct of a team of auditors representing Bechtel SAIC Company, LLC (BSC), and the U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management's (OCRWM) audit of "Analysis Reports." The primary objective of this audit was to confirm the adequacy of critical process steps related to Analysis Reports that support the potential License Application (LA). Based on the results of the audit, it was determined that many of the Analysis Reports evaluated were technically acceptable. However, the identification of several conditions adverse to quality (CAQs) resulted in the overall determination that implementation controls, technical adequacy, and process effectiveness for the Analysis Report development were unsatisfactory in terms of the audit criteria.

OFFICE OF QUALITY ASSURANCE EVALUATION OF REGULATORY INTEGRATION TEAM PHASE 1 REVIEWS

The DOE's Office of Quality Assurance (OQA) performed an "Effectiveness Evaluation" of the Regulatory Integration Team (RIT) Phase 1 reviews. This evaluation compared the results of the RIT Phase 1 reviews to the objectives defined in the Technical Work Plan and the findings from the recently completed audit of "Analysis Reports." Based on the results of this evaluation, DOE determined that the RIT Phase 1 activities generally met the established objectives. However, the evaluation also concluded that the existing procedural controls should be consistently applied to ensure that quality-affecting issues are effectively addressed. The evaluation also underscored the need for the RIT process to appropriately address the conditions identified during the "Analysis Reports" audit when reviewing document revisions as

part of RIT Phase 2 activities.

OQA SURVEILLANCE OF INPUTS TO FEATURES, EVENTS, AND PROCESS ANALYSIS MODEL REPORTS

The ORs observed the conduct of OQA's surveillance of inputs to Features, Events, and Processes (FEPs) Analysis Model Reports (AMRs) that support the potential LA. This surveillance evaluated direct and indirect inputs for a sample of FEPs reports that have been developed for the potential LA. Based on the results of this evaluation, no CAQs were identified and the surveillance team determined that the FEPs process is adequately controlled through implementing procedures.

OQA SURVEILLANCE OF LEGACY CODE AND SOFTWARE DEVELOPMENT PROCESSES

The ORs observed the conduct of OQA's surveillance of quality assurance procedure requirements for software development processes. The purpose of this surveillance was to confirm the adequacy of recently revised software procedures and to review the effectiveness of corrective actions for deficiencies identified during a previous software audit. The results of the surveillance indicated that there had been an improvement in the areas of procedure adequacy and compliance, and that previous software deficiencies had been appropriately resolved. However, the team was unable to make a determination regarding the effective implementation of the new procedures because only one code had completed the full review process. A follow-up surveillance is anticipated in the fall of 2004, subsequent to the processing of additional codes through the new process.

MONTHLY OPERATING REVIEW

During this reporting period, the ORs attended the DOE Monthly Operating Review meetings. The metrics for each indicator are stabilizing, but useful trends may not yet be apparent.

REPORT DETAILS

INTRODUCTION

The principal purpose of the On-Site Representatives' (ORs') report is to inform U.S. Nuclear Regulatory Commission (NRC) managers, staff, and contractors about information on the U.S. Department of Energy (DOE) programs in repository design; performance assessment (PA); performance confirmation; and environmental studies that may be useful in fulfilling NRC's role during precicensing consultation. The primary focus of this and future OR reports will be on DOE's programs for subsurface and surface-based testing, PA, data management systems, environmental studies, and quality assurance (QA). Relevant information includes new technical data, DOE's plans and schedules, and the status of activities to support preparation of the License Application (LA). The ORs also take part in activities associated with resolving NRC Key Technical Issues (KTIs). This report covers the period of May 1, 2004, through June 30, 2004.

OBJECTIVES

An OR's mission is to serve principally as a point of prompt information exchange and to identify preliminary concerns with site investigations and potential licensing issues. The ORs carry out this role by gathering and evaluating information, identifying concerns, and bringing more significant issues to NRC management's attention. Communication with DOE is accomplished by exchanging information on data, plans, schedules, documents, activities and pending actions, and resolution of issues. The ORs interact with DOE scientists, engineers, and managers, with input from NRC Headquarters management, regarding the implementation of NRC policies, programs, and regulations. The ORs also focus on such issues as design controls, data management systems, PA, and KTI resolution. A primary OR role is to identify areas in site studies, activities, or procedures that may be of interest or concern to the NRC staff.

1. FIELD AND LABORATORY TESTING

1.1 General Issues

Power Outage

On the evening of May 18, 2004, a power outage occurred at the Exploratory Studies Facility (ESF) from arching of a breaker at the Jack Ass Flats substation. The power was restored at approximately 6:00 A.M. the next morning. The outage affected communications and the operation underground ventilation, but both were back in full operation by 11:30 A.M. on May 19, 2004. The outage did not cause any loss of data from the ongoing experiments in the ESF.

Underground Access

On June 29, 2004, the Site Operations Manager ordered a suspension of all underground operations. This was done after an outside contractor's independent review of electrical systems at the Yucca Mountain site indicated that the condition of some power centers, and the sufficiency of a power center's battery backup, could not be determined. This was done as a precautionary measure, to fully ascertain whether these conditions precluded safe operations in the underground. The details behind the decision are that two underground power centers had no indicator lights to demonstrate their conditions; an above-ground power center that services the underground electrical

system had no working ground-fault indicator; and the battery backup to the above-ground power center had no maintenance records. The site manager stated that the electrical power distribution mine power-center equipment conditions would be fully investigated.

1.2 Scientific Investigations

DOE continues to conduct scientific and engineering investigations, or tests, to understand Yucca Mountain's geology, chemistry, hydrology, and other physical aspects and processes that could affect a potential repository's safety, and to provide input to a potential repository's design. Current information on selected Yucca Mountain Project (YMP) tests is described below.

1.3 ESF Testing

301X Areas

On May 5-6, 2004, a consultant that the Project hired performed an inspection of the 301X areas and reviewed documentation. The inspection included a visual and video observation of the voids in the crown of the tunnel at these areas. An OR observed the inspection on May 6, 2004. The consultant presented his findings and recommendations to Site Operations management on June 4, 2004. He observed that the current ground support appeared sufficient in these areas under the current conditions and that the areas had been adequately mapped. He recommended that some of the areas be supported by light-weight cement above the ground support, or improved lagging or mesh in areas of loose rock, to control smaller rock fall. He also recommended that the rock bolts continue to receive periodic testing and that regular inspection and maintenance of the 301X areas is needed, as well as inspection after seismic events.

During this reporting period, the ORs received information addressing the Project's proposed closure of OR Open Item 04-01 on the classification of ground support in the ESF. At the end of the reporting period, the ORs were still reviewing this information.

1.4 Enhanced Characterization of the Repository Block Testing

ECRB Cross-Drift Moisture Monitoring

All bulkheads, up to the bulkhead at Station 17+63, were sealed in November 2003. During this reporting period, the equipment for taking gas samples behind the bulkhead remained operational. Current plans call for a re-entry for equipment maintenance, observation, and possible sample collection in the September 2004 time frame.

Alcove 8 (Large-Plot Test)

Tracer application began on March 1, 2004. Tracer application was completed on April 8, 2004. Non-tracer tagged water continues to be added as the tracer is flushed out of the rock. Selected boreholes in Alcove 8 were neutron-logged the week of May 24, 2004.

1.5 Surface-Based Field Testing

Investigation of Magnetic Anomalies in the Yucca Mountain Region

The aeromagnetic survey work resumed the week of May 3, 2004, after stopping on February 21, 2004, when the aeromagnetic survey instrument package was damaged after hitting a rock outcrop. The aeromagnetic survey was completed the week of June 7, 2004. After processing of the data, DOE will hold a meeting with NRC to discuss the results.

Nye County Early Warning Drilling Program

During this reporting period, Nye County, in conjunction with Los Alamos National Lab, continued conducting hydraulic conductivity measurements on repacked core samples from well 19PB. This work is being conducted at the Nye County hydraulic laboratory in Pahrump, Nevada. Water sampling at selected Nye County boreholes was conducted on May 10-12, 2004.

Inyo County Well Drilling

Drilling of the next well is now expected to begin in early fall 2004 at a site near Furnace Creek in Death Valley National Park.

2. **OUTREACH ACTIVITIES**

On May 10, 2004, the ORs hosted an open house in Pahrump, Nevada. Participants at the open house included NRC management and staff from the Division of High-Level Waste Repository Safety (HLWRS); Spent Fuel Project Office (SFPO); NRC Region IV; NRC's Office of the General Counsel; and the Center for Nuclear Waste Regulatory Analyses (CNWRA). The purpose of the open house was to allow members of the community to meet the ORs, obtain information on the role of NRC, and discuss issues related to pre- and post-license application activities for the proposed high-level waste repository at Yucca Mountain. The open house provided an effective forum for the constructive exchange of information, with approximately 40 individuals attending. Those in attendance were representing the public, citizen groups, local media, and members of the Department of Natural Resources and Federal Facilities of Nye County Nevada, Federal Impacts Advisory Board, and County Commission. The ORs' open house was effective in providing opportunities for public interaction and it represented an important extension of the Agency's public outreach program.

3. **QA AND ENGINEERING**

3.1 Office of Civilian Radioactive Waste Management Audit of Analysis Reports

During this reporting period, the ORs observed a team of auditors representing Bechtel SAIC Company, LLC, (BSC) and DOE's Office of Civilian Radioactive Waste Management (OCRWM) perform an audit (OCRWM-BSC-04-16) of "Analysis Reports." The purpose of this performance-based audit was to evaluate the implementation of program requirements and to confirm the adequacy of critical process steps related to the development of analysis reports that support the potential LA. Specifically, the audit team evaluated the adequacy and appropriateness of inputs and technical references, consistency of analytical information, adequacy of supporting documentation, use of qualified software, and the satisfactory completion of critical process steps.

To confirm the effectiveness of the technical product development process, the audit

team selected a representative sample of 10 completed analysis reports that had also undergone evaluation by the project's Regulatory Integration Team (RIT) Phase 1 review. These analysis reports provide analytical information that supplement model reports; however, these documents do not contain scientific models. The audit team also developed detailed checklists, which included evaluation criteria for analysis report development activities, traceability/transparency confirmation, procedural implementation verification, and corrective action program effectiveness.

Based on the results of the audit team's reviews, it was determined that many of the analysis reports evaluated were technically acceptable and that they appropriately incorporated the critical process steps. However, the audit team identified several condition adverse to quality (CAQs), which resulted in the overall determination that the implementation controls, technical adequacy, and process effectiveness for the Analysis Report development was unsatisfactory in terms of the audit criteria. The audit team noted that the data confirmation and RIT Phase 1 review process had identified several of the same CAQs, related to the analysis reports that were within the scope of the audit. However, the RIT had not documented these items on Condition Reports (CRs) in accordance with the requirements of Administrative Procedure 16.1Q, "Condition Reporting and Resolution." The team also noted that some of the issues identified during the audit should have been captured during the RIT Phase 1 review process. Additional information related to the effectiveness of the RIT Phase 1 review is provided in Section 3.2 of this report.

As a result of the ORs' observations, it was determined that the audit team was well prepared and that the audit checklists for the QA reviews and the technical evaluations were very thorough. The extensive planning and preparation associated with this oversight activity, along with the depth of understanding of the team, were identified as a significant contributors to the overall effectiveness of the audit. The ORs also noted that the level of support provided by the audited organization was excellent. No audit observations were identified, and the ORs concur with the team's findings, as presented at the post-audit meeting on June 2, 2004.

3.2 Office of Quality Assurance Evaluation of RIT Phase 1 Reviews

During this reporting period, the ORs reviewed the results of DOE's Office of Quality Assurance (OQA) RIT - Phase 1 reviews. The purpose of this quality oversight initiative was to examine the effectiveness of the RIT Phase 1 activities related to the identification of technical product "issues" and the integration of these issues into the Phase 2 mitigation process. During this process, OQA's evaluation team compared the results of the Phase 1 reviews to the objectives described in the RIT Technical Work Plan (TWP), and the findings from the recently completed audit of analysis reports (see section 3.1 of this report).

As a result of OQA's evaluation process, DOE determined that the Phase 1 RIT activities generally met the objectives stated in the governing TWP. However, this evaluation also concluded that the existing QA procedural controls need to be consistently applied to ensure that quality-affecting issues are effectively addressed. Additionally, the evaluation stressed the need for RIT personnel to address the conditions identified during the analysis report audit when reviewing document revisions as part of RIT Phase 2 activities.

3.3 OQA Surveillance of Inputs to Features, Events, and Processes Analysis Model Reports

During this reporting period, the ORs observed the conduct of OQA's surveillance of inputs to Features, Events, and Processes (FEPs), Analysis Model Reports (AMRs) that support the potential LA. This surveillance evaluated direct and indirect inputs for a representative sample of FEPs reports that have been developed for the potential LA. The objective of this surveillance was to evaluate the basis for exclusion of FEPs from the PA process. As noted during this surveillance, PA activities include a systematic analysis of the potential geologic repository, that: 1) identifies FEPs that might affect performance; 2) examines the effects of such FEPs on performance; and 3) estimates the expected annual dose to a specified receptor group. Therefore, the technical basis and rationale (including transparency and traceability) for excluding FEPs from the analyses represent significant aspects of establishing the credibility of the PA process.

To evaluate the adequacy and implementation of the FEPs process that includes the identification, classification, and screening of FEPs, the surveillance team evaluated the exclusion arguments contained in each of the sampled FEPs reports. Based on the results of this evaluation no CAQs were identified and the surveillance team determined that the FEPs process is adequately controlled through implementing procedures. The surveillance team also concluded that appropriate implementation of these procedural controls has resulted in adequate documentation and defensible inputs for FEPs exclusion arguments.

Based on the ORs' observations, it was determined that this surveillance was well-planned and effectively performed. The FEPs AMRs selected for evaluation reflected a risk-informed, performance-based approach and the timing for this surveillance was determined to be appropriate. No audit observations were identified and the ORs agreed with the surveillance team's findings.

3.4 OQA Surveillance of Legacy Code and Software Development Processes

The ORs observed the conduct of OQA's Surveillance (OQA-SI-04-017) of QA procedure requirements for software development processes performed from June 21-25, 2004. The purpose of this surveillance was to confirm the adequacy of recently revised QA software procedures and to review the effectiveness of corrective actions for deficiencies identified during previous software audit activities. Specifically, the surveillance team examined the process controls related to the reassessment of legacy codes (software baselined before January 13, 2003) and transition codes (software baselined from January 13, 2003, to March 23, 2004).

The results of the surveillance team's reviews indicated that overall there had been an improvement in the areas of procedure adequacy and compliance. The team determined that the new QA implementing procedures related to software management, qualification of software, and software independent verification and validation (IV&V) were adequate. The team also established that the requirements related to IV&V of legacy code were effectively implemented. Additionally, the team verified that the corrective actions related to the previously documented deficiencies were effective. However, the team was unable to make a determination as to the effective implementation of the new procedures (SI.11Q, SI.12Q, & SI.13Q), because only one code (GoldSim, Version 8.02) had completed the full review process. Therefore, the team recommended that a follow-up surveillance be conducted in the fall of 2004, subsequent to the processing of additional codes through the new process.

As a result of this surveillance, several recommendations were provided to BSC and four CRs were identified. Three of these CRs were characterized as minor CAQs involving

documentation errors. The remaining CR identified several examples concerning the inappropriate use of rescinded or superseded procedures to qualify legacy code.

Based on the ORs' observations, it was determined that this surveillance was effectively performed and the results, including the identified CAQs, were appropriately documented. No audit observations were identified and the ORs agreed with the results of OQA's evaluation of QA procedure requirements for software development processes presented at the June 25, 2004, management out-brief. The ORs also concur with the surveillance teams recommendation that a follow-up surveillance be performed subsequent to the processing of additional codes through the new process.

3.5 QA Management Policy

The project is currently developing a revised Quality Assurance Management Policy (QAMP). The revised QAMP, which is scheduled to be issued in early August, will identify OCRWM's approach to maintaining the quality of items and activities related to the various organizations and functions for the High-Level Waste Program. As currently envisioned, the QAMP will include the following quality documents:

- ! QA Requirements Document (10CFR Part 63-compliant);
- ! Augmented QA Program (DOE Order 414.1B-compliant);
- ! Transportation QA Requirements Document (10CFR 71-compliant);
- ! Transportation QA Program (DOE Order 414.1B-compliant); and
- ! Environmental Management QA Program

At the conclusion of this reporting period, OQA was actively working on the development of these program documents. The ORs will continue to monitor these activities and it is anticipated that this initiative will be discussed at a future QA technical exchange.

3.6 Open Items Tracking System Report

The Open Items Tracking System (OITS) was developed to provide status and information for the closure of objections, comments, and questions identified by NRC staff from 1989 to 1995. During this time frame, DOE developed responses to many of these project-related issues. However, certain items were carried forward when NRC replaced the OITS Report, in 1995, with the current system, which tracks the status of KTIs and Issue Resolution Status Reports for post-closure items related to the Project. Summary information concerning the status of NRC's OITS Report was provided to DOE by letter, from Janet Schlueter to Joseph Ziegler, dated August 1, 2002.

Subsequent to the receipt of NRC's letter, DOE initiated a comprehensive review of the disposition of all OITS items identified in the enclosure to this correspondence. As a result of this effort, DOE established a detailed record of the disposition of each of the 357 OITS items in its Commitment Management System (CMS). The records maintained in CMS, including reference citations for each issue, establish a documented justification for the closure of these items. As noted by the ORs, this Project initiative, which involved extensive documentation reviews, resulted in the development of a well-defined basis and rationale for the resolution of OITS issues, and an effective process for maintaining continuity with the various technical-basis documents that support the potential LA.

3.7 Safety-Conscious Work Environment Survey

During May 2004, the Project conducted a Safety-Conscious Work Environment survey, that involved approximately 700 OCRWM personnel. The survey was designed to help

evaluate the progress that has been made in establishing an environment where individuals are not retaliated against for raising concerns.

The initial results of the survey indicated that approximately 85 percent of the responding personnel answered favorably when asked a series of questions regarding detection and prevention of retaliation. The complete results of the survey are being analyzed and the information will be used to adjust the Project's continuing efforts to develop an environment where employees are free to raise concerns without fear of retaliation.

4. GENERAL ACTIVITIES

4.1 Meetings

During this reporting period, the following meetings were held:

- Technical Exchange on YMP's Performance Indicators - May 3, 2004, HLWRS held a Technical Exchange with DOE in Las Vegas, Nevada. This Technical Exchange discussed the YMP's Performance Indicators, including architecture, specific examples, and relationship to industry programs. Participants included representatives from the State of Nevada, Nevada counties, and interested members of the public. NRC Headquarters and CNWRA staffs participated through video connections at Rockville, Maryland, and San Antonio, Texas.
- NRC/DOE QA Meeting Concerning the YMP - May 4, 2004, staff from HLWRS and representatives from DOE met publicly for the third-quarter NRC/DOE QA Meeting in Las Vegas, Nevada. Topics discussed included QA overview activities, corrective action program issues, revisions to the Quality Assurance Requirement Description (QARD), and the status of models and software supporting the potential LA. Participants included representatives from the State of Nevada, counties, and interested members of the public. NRC Headquarters and CNWRA staffs participated through video connections at Rockville, Maryland, and San Antonio, Texas.
- NRC Staff Holds Public Meeting on NRC Evaluation of AMRs, Process Controls, and Corrective Actions - May 5, 2004, HLWRS staff conducted a public Technical Exchange with DOE representatives in Las Vegas, Nevada. NRC staff discussed the results of an April 13, 2004, report, "U.S. Nuclear Regulatory Commission Staff Evaluation of U. S. Department of Energy Analysis Model Reports, Process Controls, and Corrective Actions." NRC Headquarters and CNWRA staff participated through video connections at Rockville, Maryland, and San Antonio, Texas.
- NRC/DOE Quarterly Management Meeting Concerning the Yucca Mountain Project - May 11, 2004, staff and senior managers met Las Vegas, Nevada to discuss issues related to DOE's potential LA for constructing a geologic repository at Yucca Mountain. Discussion topics at this meeting included: DOE and NRC program updates; status of DOE's budget; KTI resolution; and LA status. Various stakeholders, participated in the meeting including representatives from the State of Nevada, Nye County, Clark County, Lincoln County, the General Accounting Office, industry representatives, Nevada Nuclear Waste Task Force, and members of the public. NRC staff in Rockville, Maryland, and contractor personnel at the CNWRA, in San Antonio, Texas, also took part in the meeting, through video and audio connections.

The next quarterly NRC/DOE management meeting is tentatively scheduled for August 19, 2004, in Rockville, Maryland.

- Presentations to National Conference of State Legislatures' High-Level Waste Working Group - May 12, 2004, both NRC's HLWRS Director and the SFPO Senior Technical Advisor for Transportation made presentations on the Yucca Mountain Project at the National Conference of State Legislatures' High-Level Waste Working Group meeting in Las Vegas, Nevada. The presentations covered NRC's safety review and licensing process for the proposed repository, and the transportation of spent nuclear fuel.
- NRC Visit to the Idaho National Engineering and Environmental Laboratories' Spent Nuclear Fuel Project - June 22-23, 2004, staff from the NRC High-Level Waste program toured several of DOE's Idaho National Engineering and Environmental Laboratories' spent fuel storage and handling facilities. The purpose of the visit was to familiarize the staff with the types of spent nuclear fuel-handling operations and associated facilities that may be used at the proposed Yucca Mountain geologic repository.

4.2 Site Visits

On May 6, an OR visited the site to observe inspection of 301X areas.

During June 2004, an OR made numerous visits to the site to update training and qualifications needed to maintain access to the underground portions of Yucca Mountain.

**U.S. NRC ON-SITE LICENSING REPRESENTATIVES' TRACKING REPORT FOR OPEN ITEMS - FOLLOWED IN
BI-MONTHLY OR REPORT**

Table 1

<i>OPEN ITEM NUMBER (For Tracking only)</i>	<i>BRIEF DESCRIPTION OF OPEN ITEM</i>	<i>OPEN ITEM OR REPORT NO.</i>	<i>DATE OPEN ITEM CLOSED</i>
AOI-YMSCO-ARC-02-12-01	Identifies the need for DOE OQA to ensure that procedure development and review process include a documented evaluation to verify compliance with the requirements of the YMP's QARD.	OR-03-01	OR Report No: OR-03-03 August 15, 2003
OR Open Item 04-01	A concern regarding the safety analysis of the ground support system in the ESF.	OR-04-01	
OR Open Item 03-06	Based on review of CR-756, 12 quality-affecting procedures were approved without meeting the applicable QARD requirements.	OR-03-05	
OR Open Item 03-05	The continued use of unqualified software in quality-affecting technical products appears to be in conflict with the governing requirements of the implementing procedures and the QARD.	OR-03-04	
OR Open Item 03-04	With a tentative date of mid-June to evaluate CAR BSC(B)-03-(C)-107, the RCD has not acted on this CAR in a timely manner and it has remained open for 4 months without resolution.	OR-03-03	OR Report No: OR-03-05 January 12, 2004
OR Open Item 03-03	An evaluation in DOE's progress in implementing corrective actions associated with CAR B.C.-01-C-001, concerning model validation, the OR reviewed TAPS (approx. 43 models). Based on the results, it could not be established if the evaluation criteria will result in the development of models with adequate confidence for the LA.	OR-03-02	
OR Open Item 03-02	During a review of the MII confirmation packages, it was identified that the action statement execution task descriptions and completion schedules for many of the reviewed pkgs had been modified without appropriate justification. Therefore, pending the resolution of this apparent deviation from a commitment to administer the MII in accordance with the requirements of AP-5.1Q, this issued is identified as this OR Open Item.	OR-03-02	OR Report No: OR-04-02 July 8, 2004
OR Open Item 03-01	This Open Item is based on issues on separate DRs: (1) the effective resolution of concerns related to inadequate personnel training , (2) the failure to establish an effective transition plan, and (3) the evaluation of the SCWE issues.	OR-03-01	OR Report No: OR-03-04 Issues 1 & 2 closed October 20, 2003 OR Report No: OR-04-02 Issue 3 closed July 8, 2004

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OR Open Item 02-13	The current status of corrective & preventive actions associated with CAR No. BSC-02-C-01 revealed that not all corrective actions stated had been complete.	OR-02-05	OR Report No: OR-03-05 January 12, 2004
OR Open Item 02-12	Contrary to requirements of the QARD Supplement III 2.4.C procedure AP-SIII.2Q inappropriately allows for the use of unqualified data. BSC QA procedure change control program failed to identify this issue.	OR-02-05	
OR Open Item 02-11	Based on surveillance not identifying specific problems with software functionality for codes tested, 7 - including NUFT, did not pass ITP and/or VTP surveillance.	OR-02-05	OR Report No: OR-03-06 February 18, 2004
OR Open Item 02-10	Pending appropriate evaluation and documentation of the design control attributes associated with requirements of 10 CFR 63.44 and Part 21.	OR -02-04	
OR Open Item 02-09	Pending revision of engineering procedures, to include appropriate design verification considerations.	OR-02-04	OR Report No: OR-03-06 February 18, 2004
OR Open Item 02-08	The required performance of annual audits' justification for delaying a scheduled audit of YMSCO for 3-months with an additional extension does not appear to be adequately supported. Deviation from requirement of sub-section 18.2.1E of the QARD.	OR-02-04	OR Report No: OR-02-06 January 23, 2003
OR Open Item 02-07	Model Validation Impact Assessment addressed the effect of inappropriately validated models on TSPA-SR. Many cases of impact assessments used TSPA-SR results to evaluate the local impacts. It's unclear how this practice evaluated the cumulative impact of all the models in question.	OR-02-01	OR Report No: OR-03-06 February 18, 2004
OR Open Item 02-06	Unqualified Data Impact Assessment - NRC staff identified unqualified data that could be replaced with qualified data for the performance assessment. For the risk-significant components, an evaluation of unqualified data that is replaced with qualified data would help determine if efforts should be undertaken to qualify the removed data.	OR-02-01	OR Report No: OR-04-02 July 8, 2004

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<i>OPEN ITEM NUMBER (For Tracking only)</i>	<i>BRIEF DESCRIPTION OF OPEN ITEM</i>	<i>OPEN ITEM OR REPORT NO.</i>	<i>DATE OPEN ITEM CLOSED</i>
OR Open Item 02-05	Provisions are in place that allow for model validation to continue past issuance of the documentation. The models used in the performance assessment should have adequate support for their representation at the time the performance assessment documentation is issued.	OR -02-01	OR Report No: OR-03-06 February 18, 2004
OR Open Item 02-04	A number of criteria have been developed related to various forms of review. If a review is relied upon for model validation, it should be directed at validating the model and it should encompass the full body of information to the extent practical.	OR-02-01	OR Report No: OR-03-01 April 14, 2003
OR Open Item 02-03	More objective criteria (comparison to data not used in the development of the model) typically results in higher confidence in model validation are not distinguished from the more subjective, problematic criteria.	OR-02-01	OR Report No: OR-03-02 June 11, 2004
OR Open Item 02-02	Current process controls specify that one or more of nine criteria may be utilized to validate a model. All of the criteria should increase confidence in the modeling process, some criteria do not appear to be appropriate for addressing whether the model is valid for its intended use.	OR-02-01	OR Report No: OR-03-01 April 14, 2003
OR Open Item 02-01	Failure to properly include the specific issues identified in the Concerns Program Final Report in the resolution process may result in not adequately the original employees concern.	OR-02-01	OR Report No: OR-02-06 January 23, 2003